**Procedure**

The study was conducted at the tide pools of Makapuu beach. The results for this experiment were taken at the times of 7:45 in the morning, and 11:30 in the morning about a week apart. Each time I went, I observed two tide pools, and I went twice so that I had observed 4 tide pools. During my visits, I took note of the number of animal species, the number of plant species, the distance from the ocean, and the amount of human disturbance. I chose to observe these things because if one tide pool had more human disturbance than the others, some of the fish, or plants could have been harmed. I didn’t really think that the distance away from the ocean would really make a difference but thought it was something I should take note of. For this part of the study, I didn’t work with anyone else because my partner (Jade) was doing a study or experiment with the animals at the tide pools of Makapuu. The question that I had that I was going to answer was; is there a relationship between the number of plant species in a tide pool, and the number of animal species in a tide pool. For example, are there more plant species when there are a lot of animal species? Or, is there less plant species when there is not that many animal species? To do this, I picked 4 tide pools. 3 where about the same size while one was about ½ the size of the other ones. I counted the number of Animal Species and the number of Plant Species in each tide pool. I also recorded the human disturbance and the distance from the ocean, which remained the same for all tide pools.

**Results**

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| --- | --- | --- | --- | --- |
|  | Number of Animal Species | Distance From Ocean | Human Disturbance | Number of Plant Species |
| 1 | 7: Silver fish, grew fish with black/yellow dots, black with orange dotted fish, big rock colored fish, long green and brown fish, black fish with yellow stripes, skinny black fish | Right on the oceanfront, water is almost constantly flowing in when there are waves. | Minimal | 6: Sea urchins, red mossy leaf like thing, 4 kinds of algae that cling to the rocks. |
| 2 | 7: Black/Grey striped fish, grey with black and yellow dots, big rock colored fish, dark black skinny fish, crab, black fish with silver eye, tiny snails | Right on the oceanfront, water comes in sometimes when there are big waves. | Minimal | 9: green moss, circular brown plant, red skinny plant, 5 colors of algae; pink, green, blue, red, orange, sea urchin. |
| 3 | 5: Brown fish with silver underbelly, tiny fish that blend in with the rocks, tiny snails, and crabs, grew fish with black/yellow dots. | A little bit from the ocean but when the waves are really big, water sometimes flows in. | Little Pieces of glass are in the tide pool | 2: Red and green moss/algae that covers parts of the rocks that are underwater |
| 4 | 3: Grey fish with black stripes, grey fish with black and yellow dots, skinny black fish. | Right on the ocean, water is constantly flowing in with both little and big waves. | Minimal | 9: Sea Urchins, brown circular plant like thing, pink scaly looking thing, red, green, pink, purple algae/moss, sea cucumber. |

I went on Tuesday, the 9th of December at 7:30 a.m. to observe two tide pools. The first tide pool that I observed was one of the bigger tide pools. It was also very close to the ocean and most of the time there would be water flowing in. When the tide is high, this tide pool goes totally under water. There were also lots of places like under rocks or in cracks from fishes to hide. The first time I went to this tide pool, there was a greater variety of plant species. But this time, there were not as many, but still a good number. There were 7 types of different animal species, and 6 different kinds of plant species. The second tide pool that I observed that same day was about the same size as the first tide pool I observed that day. It was a little further away from the ocean though. But water was able to flow in when there was at least a medium sized wave.The second time I went, I observed two more tide pools. I went on a Sunday, the 14th of December at 11:45 a.m. The first tide pool I observed that day was the furthest away from the ocean, and what the shallowest. This tide pool didn’t have very many plant or animal species. There were two kinds of moss or algae. One was red and one was green. There was mostly the red moss or algae covering the rocks. Also, there were only algae on the parts of the rocks that were under water. There were also 5 kinds of different fish with the exception of small crabs and snails. The second tide pool that I observed that day was very close to the first tide pool that I observed the first time I went. Like the other one, it was very close to the ocean. It was also the smallest tide pool out of the four that I had observed. It was very close to the ocean so that most of the time water was flowing into the tide pool. It also had the least about of animal species with three, and it also had the most plant species with nine.